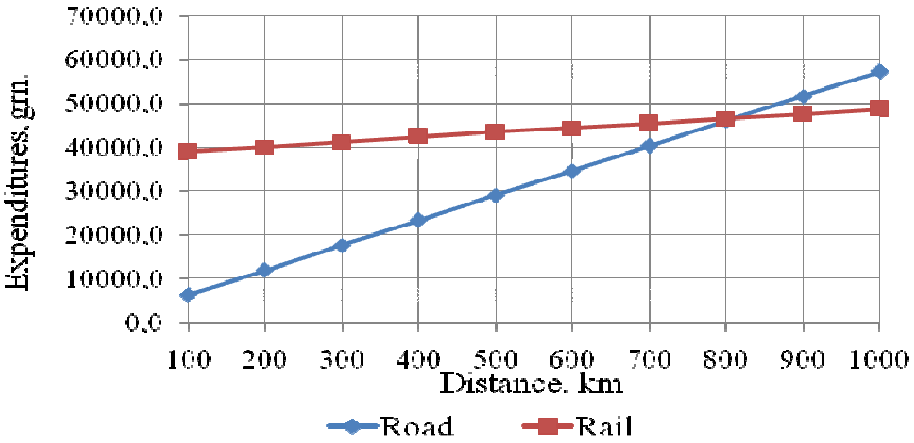

Fig. 2.Graph of the customer's expenditures and transport distance while transporting cargo by road (A) and rail (Z) in Ukraine without consignees' rail siding (cargo amount is 40 tons)

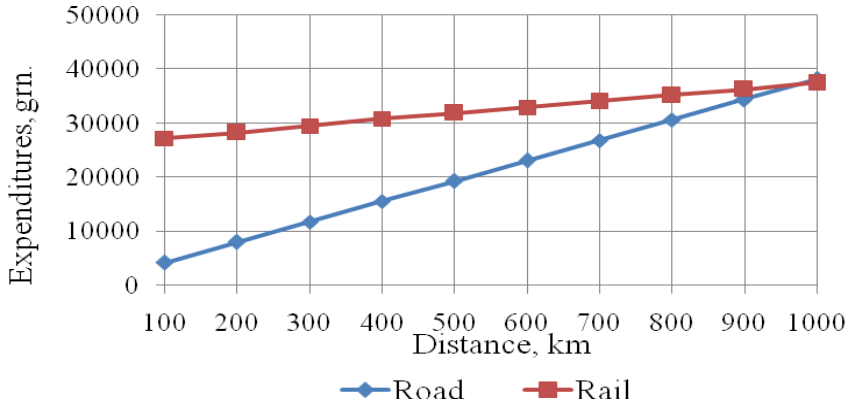

Fig. 3.Graph of the customer's expenditures and transport distance while transporting cargo by road (A) and rail (Z) in Ukraine without consignees' rail siding (cargo amount is 60 tons)

better to use rail transport for building materials' transportation in Ukraine without consignees' rail siding.

CURRENT STAGE OF THE ORGANIZATION OF FREIGHT MOTOR TRANSPORT ENTERPRISES

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In general organizational and planning activity of freight motor transport enterprise encompasses a wide range of planning, economic, organizational and technical tasks including the development of scientifically proven promising operational plans, the optimal way of selection of their realization and the regular monitoring organization of plans implementation.

Particularly, operational planning is the final planning element of the company planning system. It means the long, medium and short - term plans and it is one of the

operational management tools.

The traditional transport terminology means that the operational planning tasks and freight transportation management imply the problems solved on the final stage of transportation production. The solutions of these tasks are aimed at achieving the effectiveness of transport resources utilization for execution of transportation orders.

Operational planning process includes the sequence of the following tasks execution:

- initial data receiving;
- rational vehicle option;
- vehicle downloading;
- route movement development;
- schedule development.

In the operational planning and management problems at freight motor transport enterprises there were involved scientists and practitioners.

The German researcher Thorben Seiler emphasizes that operational transportation planning incorporates the most precise planning level where resources and requirements are described at a highly detailed level. It is usually performed by local management in a highly dynamic environment. Thorben Seiler noticed that operational transportation planning was focused on short-term decisions based on shipping orders. Planning is no longer executed to have been based on continuous material flows but on transportation orders quantified origin, destination, quantity and date of a transportation task. The availability of this information determines the planning horizon usually stretched from a few hours to a couple of days. Researcher said that the mode and carrier choice and the transportation schedules implementation and their adjustment were the main parts of the operational transportation planning process [1].

“Transportation Planning Capacity Building Program” noted that transportation planning played a fundamental role in the state, region or community’s vision for its future. It includes a comprehensive consideration of possible strategies, an evaluation process that encompasses diverse viewpoints, the collaborative participation of relevant transportation - related agencies and organizations. Transportation planning is a cooperative process designed to foster involvement by all users of the system, such as business communities, community groups, environmental organizations, traveling public, freight operators, and general public, through a proactive public participation process [2].

Many authors have addressed the use of optimization in trucking. Norwegian scientists Geir Hasle, Dag Kjenstad, Carlo Mannino and Patrick Schittekat in their studies accentuate that to develop a decent plan for transportation is a very important problem. While humans can still find reasonable plans using rules of thumb, automatic decision support systems can search plans that are superior to the ones created by humans. Solution of the Vehicle Routing Problem is a key to efficient transportation management. The routing optimization program called Spider (Industrial Vehicle Routing Problem Solver) has been developed and offered

by these scientists. According to them the implemented software will allow to reduce a number of shifts, less working hours, a reduction of distance driven and total transportation costs minimization [3].

Professor Goos Kant concluded that the optimization technology helped centralize the planning processes. Software helps define a clear planning process, to organize efficiently the necessary data and manage the quality of data, as well as define key performance indicators to inform decision - making on quality [4].

Having analyzed the current stage of the operational planning tasks of freight automobile transportation the conclusion was made.

The decisions of vehicle rational choice for cargo transportation, routing, development schedules, vehicles loading tasks are usually resolved at the local level using criteria for solving the problem without incorporating other operational planning solutions. This approach gives that the optimal local level solution making impossible the obtaining of the next local optimal levels solution.

The consideration of the mutual influence decisions made on the local level is one of the perspective quality improvement tasks of operational planning process. The method of parallel operational planning tasks solution is considered to be used at freight motor transport enterprises. The proposed method of parallel tasks solution allows to consider the mutual influence of the operational planning problems solution results and to reduce eventually transportation costs.

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CHEMICAL GROUTING OF SOILS

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In the light of evolving trends for improving capital construction and reconstruction of existing enterprises as well as developing underground space in modern urban planning chemical grouting assumes a particular relevance.

The essence of chemical grouting of weak soils consists in inserting into the soil low-viscosity chemical solutions pumped under pressure through previously drilled or clogged injectors or through specially equipped wells. The latter are to harden in a strictly fixed period the pore space of soil, which becomes consolidated and waterproof.